DEPARTMENT OF THE NAVY
OFFICE OF THE CHIEF OF NAVAL OPERATIONS
2000 NAVY PENTAGON
WASHINGTON, DC 20350-2000

IN REPLY REFER TO

Canc frp: Mar 01

OPNAVNOTE 4700
Ser N431H/0U593106
1 March 00

OPNAV NOTICE 4700

From: Chief of Naval Operations

Subj: NOTIONAL INTERVALS, DURATIONS, MAINTENANCE CYCLES, AND REPAIR MANDAYS FOR DEPOT LEVEL MAINTENANCE AVAILABILITIES OF U.S. NAVY SHIPS

Ref: (a) OPNAVINST 4700.7J
(b) OPNAVINST 3120.33B
(c) OPNAVINST 4780.6C (NOTAL)

Encl: (1) Notional Intervals, Durations, Maintenance Cycles and Repair Mandays for Depot Level Maintenance Availabilities
(2) List of Maintenance Terms and Definitions

1. Purpose

a. To issue depot level availability notional intervals, durations, maintenance cycles, and repair mandays for all ships of the U.S. Navy, except those ships assigned to the Military Sealift Command and the Naval Special Warfare Command.

b. To provide a detailed description of availability types and current maintenance terms.

2. Cancellation. OPNAVNOTE 4700 Ser N431H/9U593181 of 24 June 1999.

3. Background. Reference (a), Maintenance Policy for Naval Ships, establishes the policies and responsibilities for planning, programming, budgeting, scheduling, performing, and evaluating maintenance of ships. References (b), Submarine Extended Operating Cycle (SEOC) Program, and (c), Procedures for Administering Service Craft and Boats in the U.S. Navy, issue the depot level maintenance requirements for nuclear ship and non-nuclear service craft, respectively. This notice does the following:

a. Establishes notional intervals, durations, and repair mandays for depot level maintenance availabilities of U.S. Navy ships. Maintenance cycles are derived from the combination of notional intervals and durations. This notice constitutes a major revision from the previous version and should be reviewed in its entirety.

b. Provides a process for future revisions to Chief of Naval Operations (CNO) approved notional intervals, durations, maintenance cycles, and repair mandays.

c. Provides a process for obtaining approval to change scheduled CNO availabilities.

d. Changes in this notice include:

(1) Adds ARS 50 class (forward deployed naval forces (FDNF)) due to homeport changes.

(2) Removes DDG 993 class due to decommissioning.

(3) Adds 2.7% to all CV / CVN notional manday figures to account for use of fire watches.

(4) PACFLT and LANTFLT ship designations are dropped.

(5) Changes durations, intervals, maintenance cycle and notional mandays for following ship classes:

AOE 1
AOE 6
ARS 50 (includes FDNF)
CG 47 (includes FDNF)
DD 963 (includes FDNF)
DDG 51 (includes FDNF)
FFG 7 (includes FDNF)
LHA 1 (includes FDNF)
LHD 1 (includes FDNF)
LPD 4 (includes FDNF)
LSD 36
LSD 41 (includes FDNF)
LSD 49 (includes FDNF)
LST 1179
MCM 1 (includes FDNF)
MCS 12
MHC 51 (includes FDNF)

(6) Continuous maintenance (CM) figures for specified ships are added.

(7) Changed notional durations, intervals, and notional manday figures for all vessels except CV, CVN, LHD 1 (FDNF), LPD 4 (FDNF), MCS, MCM (FDNF), MHC 51 (FDNF) were derived using the Maintenance Requirements System (MRS).

4. Policy. CNO requirements for the accomplishment of ship, submarine, and service craft maintenance are contained in references (a) through (c).

a. Maintenance cycle is defined as the period of time which starts after the completion of a ship's overhaul (or docking availability, when no overhaul availabilities are included in the maintenance plan) and ends after completion of the next overhaul or docking availability. For new construction or conversion ships, the maintenance cycle starts after completion of the post shakedown availability or as defined in the ship's class maintenance plan.

b. Interval is defined as the period from the completion of one scheduled depot availability to the start of the next scheduled depot availability.

c. Duration is defined as the period from the start of an availability to its completion.

d. Continuous maintenance (CM) is defined as depot level maintenance conducted annually on specified vessels outside of scheduled CNO availabilities.

e. Repair mandays are those type commander maintenance mandays typically accomplished by the executing activity to satisfactorily complete the type of availability indicated. Repair mandays include Title D and F alteration mandays normally accomplished during the availability. Repair mandays do not include mandays from concurrent intermediate level maintenance availabilities.

(1) Submarine repair mandays are derived from Class Estimating Standards (CES).

(2) Surface ship repair mandays are derived from Class Maintenance Plan (CMP) estimated mandays and the MRS.

(3) Aircraft carrier estimated repair mandays are derived from Aircraft Carrier Continuous Maintenance Program (ACCMP) for ships under the Engineered Operating Cycle (EOC) or Incremental Maintenance Program (IMP), as applicable.

(4) Actual durations of depot availabilities may be adjusted to accommodate necessary maintenance, modernization, and depot loading. The durations specified in enclosure (1) provide the best notional estimates for long range planning.

(5) The mandays specified in enclosure (1) represent the "typical" mandays required by the executing activity and provide the best basis for programming and

budgeting purposes. They are neither the minimum nor the "cap" for ship type availabilities. Manday estimates which exceed or reduce the notional mandays for specific ship availabilities will be incorporated into the Fleet Modernization Program Management Information System (FMPMIS) data-base when technical justification is provided to CNO and Commander, Naval Sea Systems Command. Changes to the mandays may be required based on actual ship material condition, actual shipyard estimates or for additional services and light-off assessment preparations associated with extended duration availabilities. (As a budgeting tool for extended duration availabilities, plan an additional eight percent of notional mandays for each month extension to allow for additional services and light-off assessment preparations.)

(6) Allowable deviations for submarine depot availabilities are specified in reference (b).

f. In accordance with reference (a), all depot availability schedule changes must be coordinated among cognizant Fleet Commanders in Chief (FLTCINCs), COMNAVSEASYSCOM SEA-04X and SEA-08 for nuclear-powered ships or ships with nuclear support facilities) and CNO (N42, N43, N85, N865, N871, N885).

g. Revisions to notional intervals, durations, maintenance cycles, and mandays shall follow the following process:

(1) CNO (N43) issues guidance announcing OPNAVNOTE 4700 revision cycle schedule.

(2) Any activity submits recommended revisions to the COMNAVSEASYSCOM (SEA-04M and SEA-08 for nuclear-powered ships or ships with nuclear support facilities) with an information copy to the Fleets and CNO (Resource Sponsor and N431).

(3) COMNAVSEASYSCOM (SEA-04M and SEA-08 for nuclear-powered ships or ships with nuclear support facilities) serves as the NAVSEASYSCOM POC for all platform Class Maintenance Plans; coordinates review of data supporting recommended revisions; and endorses recommendations with rationale for approval or disapproval.

(4) Resource sponsor reviews and requests CNO (N43) modify OPNAVNOTE 4700 as required.

(5) CNO (N43) prepares, obtains resource sponsor, FLTCINC, and NAVSEA concurrence; then issues revised OPNAVNOTE 4700.

5. Action. FLTCINCs, COMNAVSEASYSCOM, and CNO sponsors are to implement the above guidance following the detailed policy provided in references (a) through (c).

6. Cancellation contingency. Upon issuance of next notice.

H. J. WOODBURN
By direction

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NOTIONAL INTERVALS, DURATIONS, MAINTENANCE CYCLES, AND REPAIR MANDAYS FOR DEPOT LEVEL MAINTENANCE AVAILABILITIES

SHIP CLASS	MAINT STRATEGY	TYPE AVAIL	NOTIONAL DURATION (MOS)	NOTIONAL INTERVAL (MOS)	MAINT CYCLE (MOS)	NOTIONAL MANDAYS (000)	TIME LINE NUMBERS INDICATE MONTHS						
AFDL 6	ROH	SCO	3	60	63	15.0	SCO| 0	-----| 60	SCO| 63				
AFDM CL	ROH	SCO	6	60	66	40.0	SCO| 0	-----| 60	SCO| 66				
AFDM 7	PM	DCM	12		12	7.5	| 0	DCM| 12					
AGF 3 (FDNF) NOTE 1	PROG	DSRA ISRA	5 3	60 12	62	49.0 14.0	DSRA| 0 -----| 57	-----| 12 DSRA| 62	ISRA| 15	-----| 27	ISRA| 30	-----| 42	ISRA| 45
AGF 11	PM	DPMA PMA	5 3	51 15	56	24.8 15.4	DPMA| 0	-----| 15	PMA| 18	-----| 33	PMA| 36	-----| 51	DPMA| 56
AGSS 555	PM	DPMA1 DPMA2	6 8	42 42	72	UNIQUE	DPMA1 0	-----| 18	DPMA2| 26	-----| 42	DPMA1| 48	-----| 66	DPMA2| 72
AOE 1 CL	PM	DPMA PMA CM	4 3	66 20	70	50.0 45.7 2.2	DPMA| 0	-----| 20	PMA| 23	-----| 43	PMA| 46	-----| 66	DPMA| 70
AOE 6 CL	PM	DPMA PMA CM	4 3	66 20	70	27.7 13.3 1.8	DPMA| 0	-----| 20	PMA| 23	-----| 43	PMA| 46	-----| 66	DPMA| 70
ARDM CL	ROH	SCO	6	60	66	40.0	SCO| 0	-----| 60	SCO| 66				

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SHIP CLASS	MAINT STRATEGY	TYPE AVAIL	NOTIONAL DURATION (MOS)	NOTIONAL INTERVAL (MOS)	MAINT CYCLE (MOS)	NOTIONAL MANDAYS (000)	TIME LINE NUMBERS INDICATE MONTHS
ARS 50 CL	PM	DPMA	4	51	55	7.8	DPMA| -----| PMA| -----| PMA| -----| DPMA|
		PMA	2.5	15		3.9	0 15 17.5 33.5 36 51 55
		CM				0.7	
ARS 50 CL	PM	DSRA	4	51	55	9.7	DSRA| ----| SRA| ----| SRA| ----| DSRA|
(FNDF)		SRA	2.5	15		4.8	0 15 17.5 33.5 36 51 55
AS 39	PM	DPMA	4	96	100	38.4	DPMA| ----| PMA| ----| PMA| ----| DPMA|
		PMA	3	30		18.0	0| 30 33| 63| 66 96| 100|
CG 47 CL	PROG	EDSRA	8	140	148	34.4	EDSRA| -----| SRA| -----| SRA| -----| DSRA|
		DSRA	4	68		14.7	0 21 23.5 44.5 47 68 72
		SRA	2.5	21		5.7	
		CM				1.1	-----| SRA| ----I SRA| ----| EDSRA|
							93 95.5 116.5 119 140 148
CG-47 CL	PROG	DSRA	5	48	53	36.9	DSRA| ----| SRA| ----| SRA| ----| DSRA|
FDNF		SRA	3	14		17.3	0 14 17 31 34 48 53
		CM				0.9	
CV 63	PROG	IDSRA	5	57	61	123.2	IDSRA| -----| ISRA| -----| ISRA| -----| ISRA|
(FDNF)		ISRA	4	8		66.8	0 8 12 20 24 32 36
NOTE 2							
							-----| ISRA| -----| IDSRA|
							45 48 57 61
CV 64	EOC	COH	12	60	72	386.2	COH| -----| SRA| -----| SRA| -----| COH|
& 67 CL		SRA	3	18		46.2	0 18 21 39 42 60 72
		DSRA	4			56.5	

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SHIP CLASS	MAINT STRATEGY	TYPE AVAIL	NOTIONAL DURATION (MOS)	NOTIONAL INTERVAL (MOS)	MAINT CYCLE (MOS)	NOTIONAL MANDAYS (000)	TIME LINE NUMBERS INDICATE MONTHS						
CVN 65	EOC	ESRA1	6	18	76.5	181.8	PSA|	----|	ESRA1|	----|	EDSRA1|		
NOTE 3		ESRA2	6	18		216.7	0	18	24	42	52.5		
		ESRA3	6	18		250.6							
		EDSRA1	10.5	66		386.1	----|	ESRA2|	----|	ESRA2|	----|	EDSRA2|	
		EDSRA2	10.5	66		386.1	70.5	76.5	94.5	100.5	118.5	129	
		EDSRA3	10.5	67		445.7							
							-----|	ESRA3|	----|	ESRA3|	----|	EDSRA3|	
							147	153	171	177	195	205.5	
CVN 68 CL	IMP	RCOH	32			3200.0	COH|	----|	PIA2|	----|	PIA2|	----|	DPIA2|
(68-72)		DPIA2	10.5	66	76.5	296.7	0	18	24	42	48	66	76
NOTE 4		DPIA3	10.5	67		342.9							
		PIA2	6	18		166.3	----|	PIA3|	----|	PIA3|	----|	DPIA3|	----|
		PIA3	6	18		193.0	94	100	118	124	142	152	171
		PSA/SRA	4			66.8							
							PIA3|	----|	PIA3|	----|	RCOH|	----|	PSA/SRA|
							177	195	201	219	0	4	8
							----|	PIA2|	----|	PIA2|	----|	DPIA2|	
							26	32	50	56	74	84.5	
							----|	PIA3|	---|	PIA3|	----|	DPIA3|	
							102	108	126	132	150	160	
CVN 68 CL	IMP	RCOH	32			3200.0	PSA|	-----|	PIA1|	-----|	PIA1|	-----|	DPIA1|
(73 &		DPIA1	10.5		76.5	245.3	0	18	24	42	48	66	76
LATER)		DPIA2	10.5			296.7							
NOTE 4		DPIA3	10.5			342.9	---|	PIA2|	----|	PIA2|	----|	DPIA2|	----|
		PIA1	6	18		139.6	94	100	118	124	142	152	171
		PIA2	6	18		166.3							
		PIA3	6	18		193.0	PIA3|	----|	PIA3|	----|	DPIA3|	----|	PIA3|
		PSA/SRA	4			66.8	177	195	201	219	229	247	253

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							-----|	PIA3|	-----|	RCOH|	------|	PSA/SRA	-----|
							271	277	295	0	4	8	18
DD 963 CL	PROG	DSRA	3.5	68	71.5	21.5	DSRA|	----|	SRA|	----|	SRA|	----|	DSRA|
		SRA	2.5	21		6.4	0	21	23.5	44.5	47	68	71.5
		CM				0.9							
DD 963 CL	PROG	DSRA	4	49	53	17.6	DSRA|	-----|	SRA|	-----|	SRA|	-----|	DSRA|
(FDNF)		SRA	2	15		11.1	0	15	17	32	34	49	53
		CM				1.3							
DDG 51 CL	PROG	DSRA	3.5	68	71.5	17.1	DSRA|	-----|	SRA|	-----|	SRA|	-----|	DSRA|
		SRA	2.5	21		6.9	0	21	23.5	44.5	47	68	71.5
		CM				1.1							
DDG 51 CL	PROG	DSRA	5	48	53	23.6	DSRA|	----|	SRA|	----|	SRA|	----|	DSRA|
(FNDF)		SRA	3	26		11.0	0	14	17	31	34	48	53
		CM				1.3							
FFG 7 CL	PROG	DSRA	3	67	70	13.3	DSRA|	-----|	SRA|	-----|	SRA|	-----|	DSRA|
		SRA	2	21		6.0	0	21	23	44	46	67	70
		CM				0.8							
FFG 7 CL	PROG	DSRA	3	49	52	14.0	DSRA|	-----|	SRA|	-----|	SRA|	-----|	DSRA|
(FDNF)		SRA	2	15		9.3	0	15	17	32	34	49	52
		CM				0.7							

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LCC 19 (FDNF)	PROG	DSRA SRA	3 2	58 4	61	20.3 10.2	DSRA|-----|SRA|-----|SRA|-----|SRA| 0 4 6 10 12 16 18 -----|SRA|-----|SRA|-----|SRA|-----| 22 24 28 30 34 36 40 SRA|-----|SRA|-----|SRA|-----|DSRA| 42 46 48 52 54 58 61
LCC 20	PM	DPMA PMA	4 3	51 15	55	30.0 18.0	DPMA|-----|PMA|-----|PMA|-----|DPMA| 0 15 18 33 36 51 55
LHA 1 CL NOTE 5	EOC	COH SRA CM	11 4	56 16	67	150.5 32.6 3.0	COH|-----|SRA|-----|SRA|-----|COH| 0 16 20 36 40 56 67
	PM	DPMA PMA CM	6 4	88 19	94	140.4 52.0 3.1	DPMA|-----|PMA|-----|PMA|-----|PMA| 0 19 23 42 46 65 69 ----|DPMA| 88 94
LHA 1 CL (FDNF)	PROG	DSRA SRA CM	5 3	51 15	56	77.2 39.8 3.1	DSRA|-----|SRA|-----|SRA|-----|DSRA| 0 15 18 33 36 51 56

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SHIP CLASS	MAINT STRATEGY	TYPE AVAIL	NOTIONAL DURATION (MOS)	NOTIONAL INTERVAL (MOS)	MAINT CYCLE (MOS)	NOTIONAL MANDAYS (000)	TIME LINE NUMBERS INDICATE MONTHS						
LHD 1 CL	PM	DPMA	8	65	73	136.3	|	-----|	PMA|	-----|	PMA|	-----|	DPMA|
		PMA	4	19		46.4	0	19	23	42	46	65	73
		CM				2.3							
LHD 1 CL	PROG	DSRA	5	51	56	77.2	DSRA|	-----|	SRA|	-----|	SRA|	-----|	DSRA|
(FDNF)		SRA	3	15		39.8	0	15	18	33	36	51	56
		PM				3.1							
LPD 4 CL	PM	DPMA	4	66	70	39.5	DPMA|	-----|	PMA|	-----|	PMA|	-----|	DPMA|
		PMA	3	20		25.1	0	20	23	43	46	66	70
		CM				3.2							
LPD 4 CL	PROG	DSRA	4	51	55	30.7	DSRA|	-----|	SRA|	-----|	SRA|	-----|	DSRA|
(FDNF)		SRA	3	15		23.9	0	15	18	33	36	51	55
		CM				3.2							
LSD 36 CL	PM	DPMA	4	66	70	25.1	DPMA|	-----|	PMA|	-----|	PMA|	-----|	DPMA|
		PMA	3	20		16.8	0	20	23	43	46	66	70
		CM				2.8							
LSD 41 CL	PM	DPMA	4	66	70	21.7	DPMA|	-----|	PMA|	-----|	PMA|	-----|	DPMA|
		PMA	3	20		9.3	0	20	23	43	46	66	70
		CM				1.9							
LSD 41 CL	PROG	DSRA	4	51	55	20.5	DSRA|	-----|	SRA|	-----|	SRA|	-----|	DSRA|
(FDNF)		SRA	3	15		12.2	0	15	18	33	36	51	55
		CM				2.3							

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LSD 49 CL	PM	DPMA PMA CM	4 3	66 20	70	21.7 9.3 1.9	DPMA|-----|PMA|-----|PMA|-----|DPMA| 0 20 23 43 46 66 70
LSD 49 CL (FNDF)	PROG	DSRA SRA CM	4 3	51 15	55	20.5 12.2 2.3	DSRA|----|SRA|----|SRA|----|DSRA| 0 15 18 33 36 51 55|
LST 1179 CL	PM	DPMA PMA CM	4 3	14 15	54	19.8 15.2 1.0	DPMA|-----|PMA|-----|PMA|-----|DPMA| 0 14 17 32 35 50 54
MCM 1 CL	PM	DPMA PMA CM	3 3	69 21	72	9.0 6.4 0.2	DPMA|-----|PMA|-----|PMA|----|DPMA| 0 21 24 45 48 69 72
MCM 1 CL (FDNF) NOTE 1	PROG	DSRA ISRA CM	3 3	69 12	72	7.2 2.6 0.2	DSRA|-----|ISRA|----|ISRA|----|ISRA| 0 12 15 27 30 42 45 ----|ISRA|----|DSRA| 57 60 69 72
MCS 12 CL	PM	DPMA PMA	5 3	69 21	74	28 16.5	DPMA|-----|PMA|-----|PMA|-----|DPMA| 0 21 24 45 48 69 72
MHC 51 CL	PM	DPMA PMA CM	3 2	70 22	73	4.0 2.8 0.2	DPMA|-----|PMA|-----|PMA|----|DPMA| 0 22 24 46 48 70 73
MHC 51 CL (FNDF)	PM	DSRA ISRA CM	3 2	70 12	73	7.2 2.6 0.2	DSRA|----|ISRA|----|ISRA|----|ISRA| 0 12 14 28 30| 42 44| ----|ISRA|----|DSRA| 56 58 70 73

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SHIP CLASS	MAINT STRATEGY	TYPE AVAIL	NOTIONAL DURATION (MOS)	NOTIONAL INTERVAL (MOS)	MAINT CYCLE (MOS)	NOTIONAL MANDAYS (000)	TIME LINE NUMBERS INDICATE MONTHS
NR-1	PROG	DSRA1	2	22.5	220	12.0	ROH| -----| DSRA| -----| DSRA1| -----| DSRA1|
		DSRA2	3	22.5		20.0	0 22.5 24.5 47 49 71.5 73.5
							-----| DSRA1| -----| DSRA2| -----| DSRA1| -----|
							96 99 121.5 123.5 146 148 170.5
							DSRA1| -----| DSRA1| -----| DSRA1| -----| INACT|
							172.5 195 197 219.5 221.5 240
SSBN 726 CL	EOC	ERP	4	168		33.0	DEL| -----| ERP| -----| ERO|
NOTES 6,8,10		ERO	24	240	264	310.0	0 168 172 240 264
SSN 21 CL	EOC	INAC/IRR	NOTE 7	120	268	NOTE 7	PSA| -----| DSRA| -----| DSRA| -----| DMP|
NOTES 7,8,10		DMP	13	120	132	123.0	0 38 40 78 80 120 0
		EOH	16	120	136	200.0	
		DSRA	2	38		20.0	-----| DSRA| -----| DSRA| -----| EOH| -----|
							38 40 78 80 120 0 38
							DSRA2| ----| DSRA2| ----| INACT|
							40 78 80 120
SSN 637 CL	EOC	INAC/IRR	NOTE 7	84		NOTE 7	ROH| -----| DSRA| -----| DSRA | -----| INACT|
NOTES 6,8,10		DSRA	2	28		13.5	0 28 30 58 60 84 104

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SSN 642 NOTE 8	EOC	DSRA				UNIQUE							
SSN 688 CL (688-699) NOTES 6, 8-10	EOC	INAC/IRR DSRA 2 PIRA	NOTE 7 2 NOTE 12	120 38		NOTE 7 20.0 NOTE 12	ERO| 0	-----| 38	DSRA2| 40	-----| 78	DSRA2| 80	-----| 120	INACT| 0
SSN 688 CL (700-718) NOTES 6,8-11	EOC	INAC/IRR ERO DSRA 2 PIRA	NOTE 7 24 2 NOTE 12	120 120 38	144	NOTE 7 303.0 20.0 NOTE 12	DMP| 0 -----| 120 INACT|	-----| 38 ERO| 0	DSRA2| 40 -----| 38	-----| 78 DSRA2| 40	DSRA2| 80 -----| 78	DSRA2| 80	-----| 120
SSN 688 CL (719-773) NOTES 8-11	EOC	INAC/IRR EOH DMP DSRA 1 DSRA 2 PIRA	NOTE 7 16 13 2 2 NOTE 12	120 120 120 38 38	136 133	NOTE 7 200.0 123.0 20.0 20.0 NOTE 12	PSA| 0 -----| 38 DSRA2| 40	-----| 38 DSRA2| 40 -----| 78	DSRA1| 40 -----| 78 DSRA2| 80	-----| 78 DSRA2| 80 -----| 120	DSRA1| 80 -----| 120 INACT|	-----| 120 EOH| 0	DMP| 0 -----| 38

FLEET CODES

FDNF	FORWARD DEPLOYED NAVAL FORCES

AVAILABILITY TYPES

CM	CONTINUOUS MAIN-TENANCE
COH	COMPLEX OVERHAUL
DCM	DRYDOCK CONTINUOUS MAINTENANCE
DEL	DELIVERY DATE
DMP	DEPOT MODERNIZATION PERIOD
DPIA	DOCKING PHASED INCREMENTAL AVAILABILITY
DPMA	DRYDOCKING PHASED MAINTENANCE
DSRA	DRYDOCKING SELECTED RESTRICTED AVAILABILITY
EDSRA	EXTENDED DRYDOCKING SELECTED RESTRICTED AVAILABILITY
EOH	ENGINEERED OVERHAUL
ERO	ENGINEERED REFUELING OVERHAUL
ERP	EXTENDED REFIT PERIOD
INAC	INACTIVATION AVAILABILITY
IRR	COMBINED INACTIVATION, REACTOR COMPARTMENT DISPOSAL AND HULL RECYCLING AVAILABILITY
IDSRA	INCREMENTAL DOCKING SRA

AVAILABILITY TYPES, CONT'D

ISRA	INCREMENTAL SELECTED RESTRICTED AVAILABILITY
PIA	PHASED INCREMENTAL AVAILABILITY
PIRA	PRE-INACTIVATION RESTRICTED AVAILABILITY
PIA	PHASED INCREMENTAL AVAILABILITY
PMA	PHASED MAINTENANCE AVAILABILITY
PSA	POST SHAKEDOWN AVAILABILITY
RCOH	REFUELING COMPLEX OVERHAUL
ROH	REGULAR OVERHAUL
SCO	SERVICE CRAFT OVERHAUL
SRA	SELECTED RESTRICTED AVAILABILITY

MAINTENANCE STRATEGIES

IMP	INCREMENTAL MAINTENANCE PROGRAM
PM	PHASED MAINTENANCE
PROG	PROGRESSIVE MAINTENCE
EOC	ENGINEERED OPERATING CYCLE
ROH	REGULAR OVERHAUL

NOTES:

1. ISRAs will be accomplished incrementally, dependent on the operational requirements of the Fleet commander. Docking periods during ISRAs will be scheduled as required for AGF 3.

2. KITTY HAWK is a one-of-a-kind forward-deployed carrier. The ship will require growing maintenance requirements for ISRAs during the period FY 00 to INACT less five years. As a result, the required maintenance mandays over this period are as follows:

FY00: 77K MDs FY01: 87.2K MDs FY02: 97.5K MDs

For ISRA availabilities beyond FY 02 to INACT less five years: 66.8 K MDs

3. CVN 65 has its own specifically designed Incremental Maintenance Program (IMP). It closely follows the IMP for the CVN 68 Class, but uses different names for the availabilities; e.g., ESRA and EDSRA. These will continue until the end of its service life.

4. NIMITZ Class CVNs have transitioned to Incremental Maintenance Program. The RCOH will normally coincide with the fourth DPIA depending on the operational tempo and the actual duration of earlier depot level availabilities which directly affect the rate of fuel depletion. A material condition assessment is required four years in advance of RCOH to further define manday requirements.

5. Phased maintenance will begin for each hull in the LHA 1, TARAWA Class, after its next complex overhaul.

6. Nuclear ships may require an adjustment in overhaul intervals depending on rate of fuel depletion. Mandays to support refueling preparations must be programmed up to 3 years in advance.

7. Notional mandays and duration of INAC/IRR availabilities vary by hull and have been entered into the Fleet Modernization Program Management Information System (FMPMIS).

8. Refer to OPNAVINST 3120.33B for SSN and SSBN operating cycles, maintenance strategies and extension requirements.

For the last SSN 688 Class DSRA2 executed prior to inactivation, reduce the notional mandays to 17,000 to reflect reducing the scope of work of these availabilities.

Add 3,000 man-days for dock services when a DSRA is performed at a shipyard.

11. For the first SSN 688 class ERO performed in a shipyard, add 10,000 mandays to notional ERO manday figure. For the first SSN 688 DMP performed in a shipyard, add 5,000 mandays to notional DMP manday figure.

3. A PIRA is a hull specific availability used to establish a final, abbreviated OPCYCLE prior to inactivation if required.

LIST OF MAINTENANCE TERMS AND DEFINITIONS

Activation Availability (ACT). An availability assigned to return a ship to active status.

Depot Modernization Period (DMP). An availability scheduled primarily for the installation of major high priority warfare improvement alterations.

Docking Phased Maintenance Availability (DPMA). A PMA expanded in scope to include maintenance and modernization that require dry-docking.

Docking Planned Incremental Availability (DPIA). A labor-intensive availability, of less than a year duration, for aircraft carriers in an Incremental Maintenance Program. Maintenance and modernization are accomplished. Aircraft carriers assigned to Incremental Maintenance Programs are maintained through PIAs and DPIAs in lieu of overhauls.

Docking Selected Restricted Availabilities (DSRA). An SRA expanded in scope to include maintenance and modernization that require dry-docking.

Drydock Continuous Maintenance (DCM). A nearly continuous availability period performed on drydocks which carry out industrial maintenance and selected modernization maintenance when the drydock is not in use.

Engineering Analysis. The assessment of the as-found material condition of components or systems when they are disassembled for maintenance.

Engineering Operating Cycle (EOC). This maintenance philosophy keeps ships in an acceptable material condition while sustaining or increasing the operational availability of the ship. Earmarked by a structured engineered approach for ship maintenance while minimizing the time spent in depot-level availabilities. Major elements of the maintenance strategy include:

a. Periodic inspections of selected systems and equipment to identify and document necessary repair requirements and material condition trends.

b. Periodic maintenance tasks to be accomplished at specified times during the ship's life cycle.

c. Scheduled intra-cycle Intermediate Maintenance Availabilities (IMAVs), Drydocking SRAs (DSRAs), SRAs, and ROHs to accomplish the maintenance and modernizations required to sustain or improve the material condition of the ship.

d. Extensive modernization to maintain and upgrade the ship class war fighting capability.

Engineered Periodicities. The recommended periodicity for accomplishment of a maintenance action and is based upon an engineering analysis of all relevant technical maintenance history information including material condition and performance feedback data.

Extended Docking Selected Restricted Availability (EDSRA). A DSRA expanded in scope to include maintenance and modernization that cannot be accomplished in a DSRA.

Extended Refit Period (ERP). A labor-intensive period, typically lasting four months during which SSBNs accomplish maintenance and modernization which cannot be completed during a normal refit period.

Inactivation Availability (INAC). An availability assigned to prepare a ship for inactivation or disposal. The scope of work depends on the planned disposition of the ship.

Incremental Maintenance Program (IMP). A maintenance philosophy which keeps aircraft carriers in an acceptable material condition through a series of incremental depot maintenance actions. Types of availabilities under this maintenance philosophy include PIAs and DPIAs.

Incremental Selected Restricted Availability (ISRA). An availability for continuous accomplishment of industrial maintenance and selected modernization. A nearly continuous availability period assigned to forward deployed aircraft carriers and mine warfare ships.

Overhaul. A major availability normally exceeding 6-months' duration for the accomplishment of maintenance and modernization. Program Managers frequently use terms such as:

1. Regular, Complex, or Engineered Overhaul availability (ROH, COH, or EOH) to describe or identify planning and execution differences among overhaul availabilities of different ship classes.

2. Refueling complex or engineered refueling overhaul availability (RFOH, RCOH or ERO) to describe or identify fundamental planning and execution differences among overhaul availabilities of different nuclear powered ship classes during which the reactor is also refueled.

Pre-Inactivation Restricted Availability (PIRA). A hull specific availability assigned to establish a final, abbreviated OPCYCLE prior to inactivation.

Phased Maintenance (PM). This maintenance philosophy uses depot level maintenance through a series of short, frequent Phased Maintenance Availabilities (PMAs) in lieu of Regular Overhauls (ROHs). The goals of Phased Maintenance are to maximum ship availability, improve operational readiness, and upgrade material condition. Major elements of this maintenance strategy include:

a. Availabilities are executed in the ship's home port. Ships are scheduled for PMAs of 2 to 4 months at intervals of 15 to 18 months which include both repairs and modernization.

b. Adhere to Condition Based Repair in which repair and replacement is determined by the actual material condition of systems and equipment. Only those repairs necessary to sustain proper functioning of equipment are identified and authorized for accomplishment.

c. Port Engineers are involved in the planning, budgeting, authorizing, and execution of all maintenance actions and remain with the same ships through their cycle.

d. Repair decision approval authority is preserved in the ship's COs, Port Engineers, and Supervisors of Shipbuilding, Conversion and Repair (SUPSHIP).

e. Use of multi-ship/multi-year contracts to ensure production contractor participation in the advance planning process as it is difficult to fully define all work in the condition based maintenance environment.

Phased Maintenance Availability (PMA). A short labor- intensive availability for ships in a Phased Maintenance Program for the accomplishment of maintenance and modernization. Ships assigned to Phased Maintenance Programs are maintained through PMAs in lieu of overhauls.

Planned Incremental Availability (PIA). A labor-intensive availability, of less than six months duration, for aircraft carriers in a Incremental Maintenance Program. Maintenance and modernization are accomplished. Aircraft carriers assigned to Incremental Maintenance Programs are maintained through PIAs and DPIAs in lieu of overhauls.

Post Shakedown Availability (PSA). An availability assigned to newly built activated or converted ships upon completion of post-delivery shakedown. PSAs will be scheduled so that they are completed no later than the end of the Shipbuilding and Conversion Navy (SCN) obligation work limiting date which is the date on which SCN funding and work authority terminates. Work performed shall normally include correction of defects noted during shakedown correction of deficiencies remaining from the acceptance trials and performance of class modifications remaining from the new construction activation or conversion period.

Progressive Maintenance (PROG). This maintenance philosophy is designed to support ships with reduced manning, limited organizational level maintenance, and operational tempos that limit availability periods. It is also designed to sustain a high level of readiness and increase the ship's availability for required operations. Ships with reduced manning are designed for major component removal and replacement. To compensate for the reduced manning and other shipboard maintenance off-ship component refurbishment is done by intermediate and depot level activities. This concept requires maintenance and logistic support systems significantly different from those required for conventionally manned surface ships. Major elements of the maintenance strategy include:

a. Engineered maintenance planning.

b. Progressive overhaul.

c. Upgrading of maintenance tasks from ship's force to the Intermediate Maintenance Activity (IMA).

d. Modular replacement.

e. Dedicated material support and increased stock-level procurement.

Restricted Availability (RAV). An availability assigned to an industrial activity for the accomplishment of specific items of work while the ship is present and rendered incapable of fully performing its assigned missions and tasks.

Restricted Availability Docking (RAD). A restricted availability which requires drydocking.

Selected Restricted Availability (SRA). A short labor- intensive industrial period assigned to ships in Progressive or Engineered Operating Cycle Maintenance Programs for the accomplishment of maintenance and selected modernization. Ships assigned to Progressive Maintenance Programs are maintained through SRAs in lieu of overhauls.

Service Craft Overhaul (SCO). A major industrial availability for the accomplishment of maintenance and modernization on service craft.

Technical Availability (TAV). An availability for the accomplishment of specific items of work by an industrial activity during which the ship's ability to fully perform its assigned mission and tasks is not affected.

Voyage Repair (VR) Availability. An availability solely for the accomplishment of corrective maintenance of mission- or safety-essential items necessary for a ship to deploy or to continue on its deployment. Repairs accomplished during a VR availability are frequently referred to as voyage repairs.